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EXAMINER	
SELLMAN, CACHET I	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RALF FINK
and WOLFGANG PAULUS

Appeal 2010-011662
Application 10/501,072
Technology Center 1700

Before ADRIENE LEPIANE HANLON, CHUNG K. PAK, and MARK NAGUMO, *Administrative Patent Judges*.

NAGUMO, *Administrative Patent Judge*.

DECISION ON APPEAL

A. Introduction[1, 2]

Ralf Fink and Wolfgang Paulus ("Fink") timely appeal under 35 U.S.C. § 134(a) from the final rejection[3] of claims 7-11, 17-20, 22-25, 27 and 29.[4] We have jurisdiction. 35 U.S.C. § 6. We REVERSE.

The subject matter on appeal relates to radiation curable coatings said to have improved adhesion to the substrate. (Spec. 1, ll. 6-14; 30-35.) The claimed compositions comprise a radiation-curable composition (I) and a pressure sensitive adhesive (II). Critically, the claimed embodiments exclude from the composition all pressure sensitive adhesives that require an extra compound as a curing agent.

According to the 072 Specification,[5] adhesives that can be crosslinked by means of active irradiation with energy "generally contain

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[1] Application 10/501,072, *Radiation-Hardened Coatings with Improved Adhesive Strength*, filed 9 July 2004 as the National Stage of PCT/EP03/00011, filed 3 January 2003, claiming the benefit of a German application filed 15 January 2002. The specification is referred to as the "072 Specification," and is cited as "Spec." The real party in interest is listed as BASF Ag. (Appeal Brief, filed 28 January 2010 ("Br."), 1.)

[2] A hearing scheduled for 20 September 2011, was waived.

[3] Office action mailed 11 June 2009 (cited as "FR").

[4] Copending claims 13-15 have been indicated allowable. (FR 1; Br. 2.)

[5] Kmetz has indicated support for the features of the appealed claims by stating, "[s]ee for example, page 1, line 34 to page 50, line 25, of the specification." (Br. 3, ll. 1 and 8; 4, l. 6; 5, ll. 1 and 9.) This amounts to no more than an invitation to the reader to read the entire specification, and is not in compliance with 37 C.F.R. §41.37(c)(1)(v) (2007), which requires a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, "*which shall refer to the specification by page*

poly(meth)acrylate, preferably polyacrylate, where appropriate in combination with aliphatic or aromatic epoxy resins, urethanes, polyesters or polyethers." (Spec. 35, ll. 5-9.) The prohibition against extra compounds as curing agents, of course, indicates that the combinations with epoxy resins, etc., are inappropriate if they are necessary for crosslinking; if so, such polymers are excluded from the embodiments claimed. Preferred embodiments within the scope of the claims are disclosed as including those in which a photoinitiator moiety is "attached to the poly(meth)acrylate." (*Id.* at ll. 31-32.) The 072 Specification explains that the photoinitiator may comprise cyclic imide structures, benzophenone, or acetophenone groups. (*Id.* at ll. 31-34.) In the words of the 072 Specification,

> [t]hrough irradiation with high-energy light, especially UV light, the photoinitiator brings about crosslinking of the poly(meth)acrylate, preferably by means of a chemical grafting reaction of the photoinitiator with a spatially adjacent polymer chain. The crosslinking may take place in particular through insertion of a carbonyl group of the photoinitiator into an adjacent C-H bond to form a -C-C-O-H group.

[*Id.* at 35, l. 42 to 36, l. 2.]

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and line number." (emphasis added.) The explanations required by the Regulation are particularly valuable aids to evaluating an appeal, particularly when, as here, the application presents multiple and mutually exclusive embodiments of various inventions. It is difficult to understand failures to cite the basis in the Specification for such explanations, as definitions of terms used in claims are often dispositive of the appeal.

Claim 7 is representative and reads:

7. A mixture, comprising

at least one radiation-curable composition (I) and

at least one pressure-sensitive adhesive (II);

wherein said mixture does not comprise an adhesive which requires an additional compound as a curing agent;

wherein the adhesive (II) comprises an adhesive composition crosslinkable by active radiant energy;

wherein the radiation-curable composition (I) comprises

(A) at least one polymerizable compound comprising two or more copolymerizable, ethylenically unsaturated groups,

(B) optionally, reactive diluents,

(C) optionally, photoinitiator, and

(D) optionally at least one coating additive.

(Claims App., Br. 23; indentation and emphasis added.)

The Examiner maintains the following grounds of rejection:[6]

A. Claims 7, 8, 10, 19, 20, and 22 stand rejected under 35 U.S.C. § 102(b) in view of Tsuchiko (abstract).[7]

B. Claims 9, 11, 17, 18, 24, 25, and 27 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Tsuchiko (abstract) and Akiyama (abstract).[8]

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[6] Examiner's Answer mailed 30 April 2010 ("Ans.").

[7] JPO Abstract of Susumo Tsuchiko, *Pressure Sensitive Adhesive Sheet*, JP 63-20381 (1988).

[8] Derwent Abstract Acc. No. 2003-304052 of M. Akiyama et al., JP 2002 2309185 A (23 October 2002).

C. Claims 23, 28, and 29 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Tsuchiko (abstract) and Kamiya (abstract).[9]

B. Discussion

Findings of fact throughout this Opinion are supported by a preponderance of the evidence of record.

Initially, we note that the Examiner has relied exclusively on English language abstracts of the Japanese language documents. While reliance on abstracts is not inherently improper, the extremely limited disclosure of abstracts in general greatly limits the scope of the inquiry into patentability.

In the present case, the Official Record of the Patent Office (the "eDAN" database) for the 072 Application does not appear to contain a copy of the Tsuchiko abstract. In some cases, the Examiner's rejection might be summarily reversed, for lack of evidence, or the appeal remanded for correction. In the present case, as it appears Fink has been provided with a copy of an abstract, and because it would appear to serve no useful purpose to prolong further the prosecution of this application, we have availed ourselves of the abstract available from the Japanese Patent Office via their website.[10] Although we do not know that this is the abstract on which the Examiner relied, it appears to contain all the information cited by the Examiner and by Fink. A copy has been added to the Official Record of this application.

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[9] JPO Abstract of Katsuhiko Kamiya et al., JP41-1228926A (1999).

[10] http://www.jpo.go.jp/, last visited 21 September 2011.

102 Rejection in view of Tsuchiko

All embodiments of the claimed invention require the combination of a pressure-sensitive adhesive (II) that is crosslinkable by active radiant energy, and that does not require an additional compound as a curing agent, with a radiation curable composition (I).

As Fink points out, Tsuchiko describes a radiation curable pressure sensitive adhesive that comprises (a) a thermoplastic resin (preferably an acrylic polymer); (b) a mono-(meth)acryloyl monomer; (c) a poly-(meth)acryloyl monomer; and a photopolymerization initiator. (Br. 6-7.) The examiner finds that "the adhesive is crosslinkable by uv radiation." (Ans. 3.)

Although the Examiner fails to make expressly the following findings, Tsuchiko component (b), the mono-(meth)acryloyl monomer can be identified with optional component (B), the reactive diluent, of radiation-curable composition (I). Tsuchiko component (c), the poly(meth)acryloyl monomer, can be identified with component (A), the compound comprising two or more polymerizable ethylenically unsaturated groups. Thus, Tsuchiko component (a), the thermoplastic acrylic polymer, is the only component that can be identified with component (II), the pressure sensitive adhesive of the claimed mixture.

According to the 072 Specification, ordinary (meth)acrylate polymers are not crosslinkable by exposure to active radiant energy, and thus (meth)acrylate pressure sensitive adhesives are excluded from the claimed mixtures. The Examiner, however, has not directed our attention to any

credible evidence that the thermoplastic resin (a), the acrylic polymer, described by Tsuchiko, is curable by active radiant energy without an additional compound as a curing agent.

Anticipation requires that every limitation of a claim be met. The Tsuchiko abstract does not disclose the critical limitation of claim 7, which is common to the remaining independent claims. We therefore REVERSE the rejection for anticipation in view of Tsuchiko.

The Examiner does not rely on the remaining abstracts to cure this deficiency of Tsuchiko. We therefore REVERSE the remaining rejections for obviousness.

C. Order

We REVERSE the rejection of claims 7, 8, 10, 19, 20, and 22 under 35 U.S.C. § 102(b) in view of Tsuchiko.

We REVERSE the rejection of claims 9, 11, 17, 18, 24, 25, and 27 under 35 U.S.C. § 103(a) in view of the combined teachings of Tsuchiko and Akiyama.

We REVERSE the rejection of claims 23, 28, and 29 under 35 U.S.C. § 103(a) in view of the combined teachings of Tsuchiko and Kamiya.

REVERSED

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Notice of References Cited	Application/Control No. 10/501,072	Applicant(s)/Patent Under Reexamination	
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U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind	Date MM-YYYY	Name	Classification	
	A	US-				
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
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	K	US-				
	L	US-				
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FOREIGN PATENT DOCUMENTS

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	N						
	O						
	P						
	Q						
	R						
	S						
	T						

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
X	U	JPO Abstract of Susumo Tsuchiko, Pressure Sensitive Adhesive Sheet, JP 63-20381 (1988).
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **63-020381**
(43)Date of publication of application : **28.01.1988**

(51)Int.Cl. C09J 7/02
C09J 7/02

(21)Application number : **61-164814**
(22)Date of filing : **15.07.1986**

(71)Applicant : **TOYO INK MFG CO LTD**
(72)Inventor : **TSUCHIKO SUSUMU**

(54) PRESSURE SENSITIVE ADHESIVE SHEET

(57)Abstract:
PURPOSE: To obtain a pressure sensitive adhesive sheet which has excellent adhesiveness and suffers neither the reduction of tack nor the contamination of the adhesive sheet after sticking to an adherend, by applying a specified radiation-curable adhesive composition to a base sheet and irradiating with electron beams and ultraviolet rays.
CONSTITUTION: A radiation-curable pressure sensitive adhesive composition (B) is obtained by mixing a thermoplastic resin (a) preferably comprising an acrylic polymer, a compound (b) having one ethylenically unsaturated double bond in a molecule, preferably comprising a monomer having one (meth)acryloyl group in a molecule [e.g., an N-alkylcarbamoyloxyalkyl (meth)acrylate], a compound (c) having at least two ethylenically unsaturated double bonds in a molecule, preferably comprising a polyfunctional monomer having at least two (meth)acryloyl groups in a molecule [e.g., ethylene glycol di(meth)acrylate], and a photopolymerization initiator (d). Component B is applied to a base sheet (A), which is irradiated with electron beams and ultraviolet rays, preferably in an inert atmosphere.